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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,155	02/28/2005	Jacobus Antonius Loontjens	4662-289	5708

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EXAMINER	
GILLESPIE, BENJAMIN	
ART UNIT	**PAPER NUMBER**
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/505,155	LOONTJENS ET AL.	
	Examiner	Art Unit	
	BENJAMIN J. GILLESPIE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 recites the limitation "the high molecular weight polyamide, polyester, copolyester," however "polyester," and "copolyester," lack antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Mumcu et al ('361). Mumcu et al teach a method for increasing the molecular weight of polyamide and copolyamide by melt-mixing amino-functional polyamide with masked diisocyanate, wherein said diisocyanate is present in amounts from 0.1 to 10 wt% and blocked with oxime and/or lactam masking agents (Abstract; col 2 lines 25-44).

3. Although patentees are silent in disclosing the limitations of claims 5 and 6, the method of Mumcu et al would inherently produce linear polyamide that has undergone an increased molecular weight after two minutes since said process is based on the same melt-mixing identical reactants; with this understanding the burden of proof has been shifted to applicants to show that

the relied upon subject matter of Mumcu et al does in fact differ from the claimed invention. *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonezawa et al (JP 09-157,347) in view of Goto et al ('820) in further view of Nelb, II et al ('094), herein referred to as: Nelb et al. Yonezawa et al teach a method for producing high-molecular weight copolyester-amides comprising the reaction product of diisocyanate with isocyanate-reactive polyester and polyamide, wherein said polyamide is amino functional (Abstract; paragraphs 9 and 26). In particular, patentees explain that the diisocyanate is present in as little as 1% by weight, and the reaction takes place in an extruder, however patentees fail to teach masked diisocyanate or twin-screw extruders.

5. Goto et al also teach the production of copolyester-amides comprising the reaction product of diisocyanate with isocyanate-reactive polyester and polyamide, wherein said polyamide is amino functional (Abstract). Patentees go on to explain that unmasked diisocyanate and amino-functional polyamide will immediately react upon mixing, and this premature reaction may cause unwanted gelling (Col 5 lines 27-37). Furthermore, Nelb et al teach a process for preparing high molecular weight linear copolyester-amides by reacting diisocyanate with isocyanate-reactive polyamide, copolyamide, or polyester-amide in a twin-

screw extruder, wherein said diisocyanate may be masked with blocking agents consisting of phenol, lactam, alcohol, or oximes (Abstract; col 2 lines 36-51; col 3 lines 29-32; col 4 lines 53-68).

6. Therefore it would have been obvious to include masked diisocyanates in the process of Yonezawa et al since Goto et al teach that reaction systems containing unmasked diisocyanate and amino-functional polyamide prematurely react, one or ordinary skill would understand that blocking agents increase the storage stability of said diisocyanates, Nelb et al teach masked diisocyanate are suitable in synthesizing high-molecular weight polyamides, and it is prima facie obvious to add a known ingredient for its known function; *In re Linder* 173 USPQ 356; *In re Dial et al* 140 USPQ 244. Furthermore, it would have been obvious to utilize a twin screw extruder in the method of Yonezawa et al, since Nelb et al teach it as being preferred in synthesizing high-molecular polyamides.

7. Regarding the limitations of claims 5 and 6, one would reasonably expect the process rendered obvious by the prior art to exhibit the same properties since Yonezawa et al teach the same method for analogous reactants. This is further reinforced by the teachings of Nelb et al that state after four minutes "maximum viscosity" is obtained, and therefore the position is taken that a permanent increase in molecular weight, i.e. chemical reaction between isocyanate group and isocyanate-reactive group, occurs within two minutes (Col 9 lines 29-31).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yonezawa et al (JP 09-157,347) in view of Goto et al ('820) in further view of Nelb, II et al ('094), herein referred to as: Nelb et al and Goyert et al ('946). Aforementioned, the prior art rendered obvious a method for producing high-molecular weight polyamides that have sufficient moldability and are the

reaction product of diisocyanate and isocyanate-reactive polymers in an extruder (Yonezawa et al; paragraph 8). Patentees fail however to explicitly describe the resulting polyamides as "linear."

9. Nevertheless, it would have been obvious to one of ordinary skill in the art to produce only linear polymers based on the teachings of Goyert et al which explain that high-molecular weight polymers produced in an extruder, linear polymers are preferred since the discharge "from the screw extruder will still be fusible or thermoplastic," i.e. exhibit sufficient moldability (Abstract; col 5 lines 21-36). By only producing linear polymers, the final product will maintain a sufficient level of thermoplasticity, which is critical to Yonezawa et al.

Response to Arguments

10. Applicant's arguments filed 12/7/2007 with respect to the rejection of claims 1-6 under 35 U.S.C. 103(a) have been considered but are rendered moot in view of the new rejections.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN J. GILLESPIE whose telephone number is (571)272-2472. The examiner can normally be reached on 8am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rabon Sergent/
Primary Examiner, Art Unit 1796

B. Gillespie